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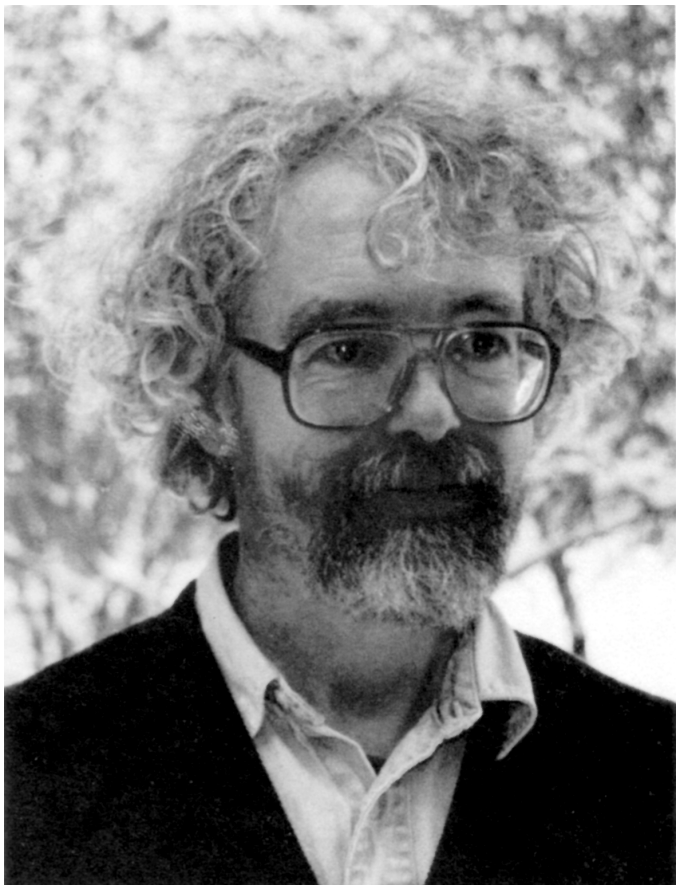
MALCOLM ALEXANDER RAMSAY (1949–2000)

Dr. Malcolm A. Ramsay, a dedicated evolutionary ecologist and naturalist, died at the age of 51 in a helicopter accident on the 21st May, 2000. He and a close colleague, Dr. Stuart Innes, were returning to the research station of Resolute (managed by the Polar Continental Shelf Project) in the Canadian High Arctic after a successful day of tagging polar bears. They experienced a helicopter crash over the pack ice close to Lowther Island. Both researchers were killed instantly, leaving the pilot as the only survivor.

Malcolm had a passion for the process of evolution, as championed by Charles Darwin and William D. Hamilton. He viewed natural selection as the ultimate force that shapes the structure and function of animals. His research on the eco-physiology of polar bears had an international reputation. His interests, however, covered an amazing array of questions about natural selection and adaptations of organisms. To illustrate the breadth of his curiosity-driven insight, consider the following titles of papers he published with co-authors: *i*) The spiral in the tusk of the narwhal (1988, *Arctic* 41:236–238)*; ii*) Constraints on brain growth (1989, *Nature* 340:194); *iii*) The evolution of viviparity in amniotes: egg retention vs. egg size reduction (1989, *American Naturalist* 133:138–148); *iv)* The allometry of mammalian adaptations to seasonal environments: a critique of the fasting endurance hypothesis (1993, *Oikos* 66:336–342); *v)* Diving behaviour of narwhals (*Monodon monoceros*) on their summer grounds (1994, *Canadian Journal of Zoology* 72:118–125).



Malcolm Alexander Ramsay

Malcolm is best known for his impressive research on polar bears. He completed, in 1986, his Ph.D. dissertation on the reproductive physiology and ecology of female polar bears under the guidance of Ian Stirling at the University of Alberta. His interests for the natural history and eco-physiology for polar bears continued to be the focus of his field research throughout his career. He and four of his students (J. Arnould, S.N. Atkinson, S. Polischuk, and M.R.L. Cattet) contributed significantly to our understanding of lactation, hibernation, fasting, body composition, eco-toxicology, and anaesthesiology of polar bears in their natural environment. He viewed polar bears as an excellent species to look at the problem of life history constraints in mammals. In my view, his theoretical insight is best illustrated by a seminal paper he published in 1986 with R.L. Dunbrack: Physiological constraints on life-history phenomena: the example of small bear cubs at birth (*American Naturalist* 127: 735–743).

In the classroom, as during any personal discussion about adaptations of organisms, Malcolm generated an unique level of enthusiasm. I can recall hours of debates with him —in a log cabin, at the bar, sitting on a snowbank during field work, or simply in the hallway of our Department. Every minute of such debates was filled with "food for thought" that inevitably lead to many more hours of reflection. Malcolm advocated a very liberal way of teaching, a professorial style that forced students to think about, rather than memorize, biological facts. He was cherished by the students and the staff working with him. It is difficult to measure the "cultural fitness" of a person (i.e., the knowledge, attitude, philosophy, and the like, that you pass along to the persons you interact with throughout your career), but I would surmise that Malcolm had a profound cultural and professional influence on the majority of his undergraduate and graduate students.

Above all else, Malcolm will be remembered as a friend, a person always willing to help. Despite his heavy workload, he took the time for friendly interactions and a bit of humour. His rather humble and easy going attitude was well reflected in his characteristic hair style! I consider it an honour to have been Malcolm's colleague and friend.

My last thought goes to the family of Malcolm. Nicholas and Thomas have lost not only their father, but also their idol. Such a loss is irreplaceable. I often think about the risks of working in remote areas; like Malcolm, I have two young children and regularly work in the Arctic. Malcolm was well aware of the risks of his work on polar bears, and was always risk-averse during field excursions. We discussed on occasions the trade-off we make between risks

and the love for our work. Unfortunately, our family members face a very different situation, a dilemma really, that cannot be resolved even after lengthy reflection. For them, there is no trade-off.

François Messier
Department of Biology
University of Saskatchewan
112 Science Place
Saskatoon, Saskatchewan, Canada
K S7N 5E2